

Serial No. 09/020,716
Group Art Unit: 1638

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-78. (Cancelled)

79. (Previously Presented) A transgenic cereal plant seed produced by the method of claim 113.

80-89. (Cancelled)

90. (Previously Presented) The expression cassette according to claim 112 wherein the promoter is a gamma zein promoter or a waxy promoter.

91. (Previously Presented) A vector comprising the expression cassette of claim 112.

92-102. (Cancelled)

103. (Currently Amended) A food or feed product produced from the transformed cereal plant seed of claim 114.

104. (Cancelled)

105. (Previously Presented) The transgenic cereal plant seed of claim 114 wherein the seed endosperm-preferred promoter is heterologous to the polynucleotide.

Serial No. 09/020,716
Group Art Unit: 1638

106-111. (Cancelled)

112. (Currently Amended) An expression cassette comprising a seed endosperm-preferred promoter operably linked to a polynucleotide encoding a barley alpha-hordothionin ~~native plant seed protein or a native plant seed protein~~ modified to contain one or more of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid.
113. (Currently Amended) A method for increasing the level of one or more of lysine and/or a sulfur-containing amino acids acid in a cereal plant seed, the method ~~comprising~~ comprises
- a) transforming a cereal plant cell with an expression cassette, and
 - b) regenerating a transgenic cereal plant to produce a transgenic cereal plant seed,
- wherein the expression cassette comprises a seed endosperm-preferred promoter operably linked to a polynucleotide encoding a ~~native plant seed protein or a native plant seed~~ barley alpha-hordothionin protein modified to contain one or more of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein the level of lysine and/or a sulfur-containing amino acid is increased in the transgenic cereal plant seed compared to a corresponding non-transgenic cereal plant seed.
114. (Currently Amended) A transgenic cereal plant seed comprising a modified barley alpha-hordothionin ~~chimeric~~ polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin ~~native plant seed protein or a native plant seed protein~~ modified to contain one of more of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid

Serial No. 09/020,716
Group Art Unit: 1638

and wherein the transgenic cereal plant seed comprises an elevated level of lysine and/or a sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.

115. (Currently Amended) A transgenic cereal plant comprising a modified barley alpha-hordothionin ~~chimeric~~ polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin ~~native plant seed protein or a native plant seed protein~~ modified to contain one or more of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein transgenic seed of the transgenic cereal plant comprise an elevated level of lysine and/or a sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.

116. (Currently Amended) A transgenic cereal plant cell comprising a barley alpha-hordothionin ~~chimeric~~ polynucleotide operably linked to a seed endosperm-preferred promoter, wherein the polynucleotide encodes a barley alpha-hordothionin ~~protein native plant seed protein or a native plant seed~~ modified to contain one or more of about 7 mole % to about 40 mole % lysine and/or about 6 mole % to about 40 mole % of a sulfur-containing amino acid and wherein transgenic seed resulting from ~~of~~ the transgenic cereal plant cell comprise one or more of an elevated level of lysine and/or a sulfur-containing amino acid compared to a corresponding non-transgenic cereal plant seed.

117-120. (Cancelled)